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GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
ONE RESEARCH CIRCLE
BLDG. K1-3A59
NISKAYUNA, NY 12309

EXAMINER	
FISHMAN, MARINA	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte THANGAVELU ASOKAN, SUNIL SRINIVASA MURTHY, PATRICIA CHAPMAN IRWIN, KUNAL RAVINDRA CORAY, ADNAN KUTUBUDDIN BOHORI, and HARI NADATHUR SESHADRI

Appeal 2011-005179
Application 11/470,668
Technology Center 2800

Before CHUNG K. PAK, JAMES C. HOUSEL, and KRISTINA M. KALAN, *Administrative Patent Judges*.

KALAN, *Administrative Patent Judge*

DECISION ON APPEAL

The named inventors (hereinafter "Appellants")[1] appeal under 35 U.S.C. § 134 from the Examiner's refusal to allow claims 1, 4-11, 16, 18, 19, 21-25, 28, and 31-36, all of the claims pending in the above-identified application. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

STATEMENT OF THE CASE

The subject matter on appeal is directed to a composite ablative arc suppression device. Spec. 1, ¶ [001]. The device has a first region having a first electrical arc ablation characteristic and a second region having a second electrical arc ablation characteristic. The first region and the second region are configured for defining an opening extending through the first region and the second region for confining an arc initiation region of an electrical arc to be generated within the opening. The first region and the second region are further configured for defining the opening so that the electrical arc is exposed to both the first region and the second region before exiting the opening. Spec. 16, Abstract.

Details of the appealed subject mattered are recited in illustrative claims 1, 16, 23, and 28, reproduced below:

> 1. A device comprising:
> a first region having a first electrical arc ablation characteristic; and
> a second region having a second electrical arc ablation characteristic different from the first electrical arc ablation characteristic and including a comparatively lower ablative vapor generation characteristic than the first electrical arc ablation characteristic,

[1] Appellants identify the real party in interest as General Electric Company, the assignee of the subject patent application. *See* Appeal Brief filed August 5, 2010 ("App. Br.") at 1.

wherein the first region and the second region define an opening extending through the first region and the second region and configured to confine an arc initiation region of an electrical arc to be generated within the opening, wherein the first region and the second region are further configured to define the opening so that the electrical arc is initially exposed to the first region, and the electrical arc is sequentially exposed to the first region, the second region, and an area outside the opening as a length of the arc progressively increases.

16. A device comprising:

at least two regions that define an opening extending through each of the at least two regions, the at least two regions having different electrical arc ablation characteristics; and

a pair of separable electrical contacts disposed within the opening and configured such that at least one contact is proximate to respective regions of progressively lower ablation rate as the contacts are progressively separated from one another.

23. A device comprising a plurality of regions that together define an opening extending through the regions and configured to confine an arc initiation region of an electrical arc to be generated within the opening, wherein at least two of the plurality of regions comprise different electrical arc ablation characteristics, and wherein the plurality of regions is configured to define the opening so that the electrical arc is exposed to respective regions of progressively lower ablation rate as a length of the arc progressively increases.

28. A device comprising:

a first region disposed around an initiation region of an electrical arc and having a first electrical arc ablation characteristic; and

a second region disposed adjacent to the first region and having a second electrical arc ablation characteristic configured to have a lower ablative characteristic than the first electrical arc ablation characteristic,

wherein the first region and the second region define an opening such that the electrical arc is initially exposed to the first region and the lengthening electrical arc is sequentially exposed to the first region, the second region, and an area outside the opening, wherein the first and second

electrical arc ablation characteristics are configured to progressively cool the electrical arc and decrease a pressure in the opening.

App. Br. 10-13 (Claims App'x).

Appellants seek review of the following grounds of rejection maintained by the Examiner in the Answer mailed November 2, 2010 ("Ans."): [2]

1. Claims 1, 4-10, 16, 18, 19, 21-25, 28, and 32-36 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,925,863 issued to Zehnder et al. on July 20, 1999 ("Zehnder"); and
2. Claims 11 and 31 under 35 U.S.C. § 103(a) as being obvious over Zehnder.

App. Br. 3.

DISCUSSION

Appellants argue all the dependent claims together with the independent claims. Accordingly, the dependent claims stand or fall with their respective independent claims. *See* 37 C.F.R. § 41.37(c)(1)(vii). Further, the Appellants argue the Section 102 and 103 rejections together, so we treat them as one.

Appellants take the position that Zehnder does not disclose an arrangement in which an electrical arc is "sequentially exposed to a first region, a second region of comparatively lower ablative vapor generation characteristic, and an area outside the opening as a length of the arc progressively increases" or to "regions of progressively lower ablation rate." App. Br. 7 (emphasis added). Appellants

[2] The rejection of claims 1, 4-11, 28, and 31-35 under 35 U.S.C. § 112, second paragraph, has been withdrawn by the Examiner. Ans. 3.

equate Zehnder's element 14 with the "first disk" and element 15 with the "second disk." Appellants further contend that there is nothing to suggest the arrangement claimed in the present application from amongst the myriad of ways in which the alternating disks of Zehnder might be arranged. App. Br. 8.

The Examiner finds that Zehnder's element 15 is the first region and element 14 is the second region, noting that Appellants misconstrued element 14 as the first region and element 15 as the second region. Ans. 6. Discs 14 and 15 are laid alternatively on one another and are sintered together in a known manner to form a monolithic block. Zehnder, Fig. 5 and col. 4, ll. 19-21.

The Examiner notes that Appellants agree with the Examiner that the disk 15 burns away to a greater extent than the first disk 14. Ans. 6; Zehnder, col. 4, ll. 21-23. Thus, the Examiner correctly finds that "(a) the disk 14 and disk 15 have different ablative characteristics, (b) disk 15 burns away a greater extent than disk 14, thereby producing more ablative gas, hence disk 15 has more ablative characteristic than disk 14; [and] (c) the arrangement can be optimally matched to the respective operating condition." Ans. 7. The Examiner further finds that the arc is initiated at the first region 15, and as the contact 4 moves away from 15 to 14 the arc is sequentially exposed to the first region 15, the second region 14, and area outside the opening. *Id.*

Finally, Appellants allege that there is no support in Zehnder for the statement that Zehnder discloses regions with different arc ablation characteristics configured to limit a pressure increase within an opening. App. Br. 9. The Examiner finds that as the arc progresses, the ablative gases will cool the arc, and the pressure would decrease, and thus Zehnder meets this limitation. Ans. 7.

Given the correctness of the Examiner's findings above, we concur with the Examiner that one of ordinary skill in the art would have readily envisaged, or would have been led to, a composite ablative arc suppression device as claimed by Appellants from the teachings of Zehnder within the meaning of 35 U.S.C. § 102(b) or 103(a).

Accordingly, we find no reversible error in the Examiner's decision rejecting claims 1, 4-10, 16, 18, 19, 21-25, 28, and 32-36 under 35 U.S.C. § 102(b) as anticipated by, or in the Examiner's decision rejecting claims 11 and 31 under 35 U.S.C. § 103(a) as unpatentable over, the disclosure of Zehnder.

ORDER

Upon consideration of the record, and for the reasons given above and in the Answer, it is

ORDERED that the decision of the Examiner rejecting the claims on appeal under 35 U.S.C. § 102(b) or 103(a) is AFFIRMED; and

FURTHER ORDERED that no time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2010).

AFFIRMED

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